AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, and listings, of claims in the application.

Claims 1-32 (Cancelled)

33. (Currently amended) A method of ~~treating~~ inhibiting growth of cancer cells in an animal or a human having the cancer cells, comprising:

(a) ~~administration of~~ administering at the cancer cells in the animal or the human having the cancer cells a composition comprising *Mycobacterium phlei* (*M.phlei*)-DNA complexed on *Mycobacterium phlei* cell wall (MCC) and a pharmaceutically acceptable carrier; and

(b) ~~administration of~~ administering a chemotherapeutic agent to ~~an~~ the animal or ~~a~~ the human having the cancer cells, wherein the composition and the chemotherapeutic agent administered to the animal or the human having the cancer cells display an anti-cancer synergism so as to inhibit the growth of the cancer cells.

34. (Previously presented) The method of Claim 33, wherein the anti-cancer synergism is potentiation.

35. (Previously presented) The method of Claim 33, wherein the composition induces cell cycle arrest in ~~cells of~~ the cancer cells, inhibits proliferation of ~~cells of~~ the cancer cells, induces apoptosis in ~~cells of~~ the cancer cells, or synchronizes cell cycles of ~~cells of~~ the cancer cells.

36. (Previously presented) The method of Claim 33, wherein the cancer cells are ~~is~~ leukemia, lymphoma or melanoma cancer cells.

37. (Currently amended) The method of Claim 33, wherein the cancer cells ~~of the cancer~~ display resistance against one or more chemotherapeutic agents.

38. (Previously presented) The method of Claim 33, wherein the chemotherapeutic agent is administered before, after, or concurrently with the administration of the composition.

39. (Previously presented) The method of Claim 33, wherein the chemotherapeutic agent is a DNA cross-linking agent, a DNA depolymerizing agent, an antimetabolic agent, an anti-tumor antibiotic agent, a topoisomerase inhibiting agent or a tubulin stabilizing agent.

40. (Previously presented) The method of Claim 33, wherein the chemotherapeutic agent is mitomycin-C, 5-fluorouracil, or cisplatin.

41. (Currently amended) A method of ~~treating~~ inhibiting growth of cancer cells in an animal or a human having the cancer cells comprising:

(a) ~~administration of~~ administering at the cancer cells in the animal or the human having the cancer cells a composition comprising *Mycobacterium phlei* (*M.phlei*)-DNA (M-DNA) and a pharmaceutically acceptable carrier; and

(b) ~~administration of~~ administering a chemotherapeutic agent to ~~an~~ the animal or ~~a~~ the human having the cancer cells, wherein the composition and the chemotherapeutic agent administered to the animal or the human having the cancer cells display an anti-cancer synergism so as to inhibit the growth of the cancer cells.

42. (Previously presented) The method of Claim 41, wherein the anti-cancer synergism is potentiation.

43. (Previously presented) The method of Claim 41, wherein the composition induces cell cycle arrest in ~~cells of~~ the cancer cells, inhibits proliferation of ~~cells of~~ the cancer cells, induces apoptosis in ~~cells of~~ the cancer cells, or synchronizes cell cycles ~~of cells~~ of the cancer cells.

44. (Previously presented) The method of Claim 41, wherein the cancer cells are ~~is~~ leukemia, lymphoma or melanoma cancer cells.

45. (Currently amended) The method of Claim 41, wherein the cancer cells ~~of the cancer~~ display resistance against one or more chemotherapeutic agents.

46. (Previously presented) The method of Claim 41, wherein the chemotherapeutic agent is administered before, after, or concurrently with the administration of th composition.

47. (Previously presented) The method of Claim 41, wherein the chemotherapeutic agent is a DNA cross-linking agent, a DNA depolymerizing agent, an antimetabolic agent, an anti-tumor antibiotic agent, a topoisomerase inhibiting agent or a tubulin stabilizing agent.

48. (Previously presented) The method of Claim 41, wherein the chemotherapeutic agent is mitomycin-C, 5-fluorouracil, or cisplatin.

49. (Currently amended) A method of ~~treating~~ inhibiting growth of cancer cells in an animal or a human having the cancer cells, comprising:

(a) ~~administration of~~ administering at the cancer cells in the animal or the human having the cancer cells a composition comprising a mycobacterial DNA complexed on mycobacterial cell wall (BCC), and a pharmaceutically acceptable carrier; and

(b) ~~administration of~~ administering a chemotherapeutic agent to ~~an~~ the animal or ~~a~~ the human having the cancer cells, wherein the composition and the chemotherapeutic agent administered to the animal or the human having the cancer cells display an anti-cancer synergism so as to inhibit the growth of the cancer cells.

50. (Previously presented) The method of Claim 49, wherein the anti-cancer synergism is potentiation.

51. (Previously presented) The method of Claim 49, wherein the composition induces cell cycle arrest in ~~cells of~~ the cancer cells, inhibits proliferation of ~~cells of~~ the cancer cells, induces apoptosis in cells of the cancer cells, or synchronizes cell cycles ~~of cells~~ of the cancer cells.

52. (Previously presented) The method of Claim 49, wherein the cancer ~~is~~ cells are leukemia, lymphoma or melanoma cancer cells.

53. (Currently amended) The method of Claim 49, wherein the cancer cells ~~of the cancer~~ display resistance against one or more chemotherapeutic agents.

54. (Previously presented) The method of Claim 49, wherein the chemotherapeutic agent is administered before, after, or concurrently with the administration of the composition.

55. (Previously presented) The method of Claim 49, wherein the chemotherapeutic agent is a DNA cross-linking agent, a DNA depolymerizing agent, an antimetabolic agent, an anti-tumor antibiotic agent, a topoisomerase inhibiting agent or a tubulin stabilizing agent.

56. (Previously presented) The method of Claim 49, wherein BCC is derived from *M. vaccae, M. chelonei, M. smegmatis, M. terrae, M. duvalii, M. tuberculosis, M. bovis BCG, M. avium, M. Szulgai, M. scrofulaceum, M. xenopi, M. kansaii, M. gastr, M. fortuitous,* or *M. asiaticum.*

57. (Currently amended) A method of ~~treating~~ inhibiting growth of cancer cells in the animal or a human having the cancer cells comprising:

(a) ~~administration of~~ administering at the cancer cells in the animal or the human having the cancer cells a composition comprising a mycobacterial DNA (B-DNA), and a pharmaceutically acceptable carrier; and

(b) ~~administration of~~ administering a chemotherapeutic agent to ~~an~~ the animal or ~~a~~ the human having the cancer cells, wherein the composition and the chemotherapeutic agent administered to the animal or the human having the cancer cells display an anti-cancer synergism so as to inhibit the growth of the cancer cells.

58. (Previously presented) The method of Claim 57, wherein the anti-cancer synergism is potentiation.

59. (Previously presented) The method of Claim 57, wherein the composition induces cell cycle arrest in ~~cells of~~ the cancer cells, inhibits proliferation ~~of cells~~ of the cancer cells, induces apoptosis ~~in cells~~ of the cancer cells, or synchronizes cell cycles ~~of cells~~ of the cancer cells.

60. (Previously presented) The method of Claim 57, wherein the cancer ~~is~~ cells are Leukemia, lymphoma or melanoma cancer cells.

61. (Currently amended) The method of Claim 57, wherein the cancer cells ~~of the cancer~~ display resistance against one or more chemotherapeutic agents.

62. (Previously presented) The method of Claim 57, wherein the chemotherapeutic agent is administered before, after, or concurrently with the administration of the composition.

63. (Previously presented) The method of Claim 57, wherein the chemotherapeutic agent is a DNA cross-linking agent, a DNA depolymerizing agent, an antimetabolic agent, an anti-tumor antibiotic agent, a topoisomerase inhibiting agent or a tubulin stabilizing agent.

64. (Previously presented) The method of Claim 57, wherein B-DNA is derived from *M. vaccae, M. chelonei, M. smegmatis, M. terrae, M. duvalii, M. tuberculosis, M. bovis BCG, M. avium, M. Szulgai, M. scrofulaceum, M. xenopi, M. kansaii, M. gastr, M. fortuitous,* or *M. asiaticum.*